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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/020,350	12/12/2001	Scott A. Arvin	30566.184-US-01	8935

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EXAMINER

NGUYEN, KIMBINH T

ART UNIT PAPER NUMBER

2671

DATE MAILED: 04/14/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/020,350

Applicant(s)

ARVIN, SCOTT A.

Examiner

Kimbinh T. Nguyen

Art Unit

2671

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to amendment filed 12/24/03.
2. Claims 1-21 are pending in the application.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Chen et al. (5,588,098).

Claim 1, Chen et al. discloses direct manipulation of an 3D object displayed in a 3D representation (col. 2, lines 39-40), comprising: displaying a 3D geometric object (a 3D representation of an object is surrounded by a bounding box 305 of fig. 3; col. 5, lines 31-37); simultaneously displaying (the bounding box and hands 311 and 313 are displayed simultaneously in fig. 3) a first oriented 3D grip glyph directly on the 3D geometric object (the top hand 311 of the bounding box appears to be pulling the bounding box up or pushing down; fig. 3) and a second oriented 3D grip glyph directly on the 3D geometric object (the hands 313; fig. 3), wherein the first oriented 3D grip glyph and second oriented 3D grip glyph provide a direct visual indications of valid movement directions (pulling up or pushing down or pulling around in a circle), during direct manipulating 3D object using the grip glyphs (col. 5, lines 53-60; fig. 3).

Claim 2, Chen et al. discloses the valid movement directions are constraints on a permissible actions (a gridding capability is provided whereby movements would be constrained along box coordinate system axes so as to stay on the intersections of a 3D grid; col. 15, lines 25-28).

Claim 3, Chen et al. discloses the first oriented 3D glyph is a grip that defined position and an active area (active zone) within a pointing device will snap to that position (clicking the pointer in any one of these active zones and dragging will result in moving, rotating, or scaling the bounding box; col. 7, lines 10-14).

Claim 4, Chen et al. discloses an orientation and direction of the first oriented 3D glyph indicate how cursor movement will be constrained (moving, scaling, or rotating, is constrained to only one or two of the three possible axes of the 3D object; col. 9, line 63 through col. 10, line 2).

Claim 5, Chen et al. teach displaying a second oriented 3D glyph on 3D object (hands 313, fig. 3), wherein the second oriented 3D glyph is differentiable from the first oriented 3D glyph (col. 5, lines 53-60)

Claim 6, Chen et al. discloses the direct manipulation occurs through user interaction with the computer drawing program (col. 7, lines 30-42).

Claim 7, Chen et al. discloses manipulating the 3D object based on direct manipulation of the first oriented 3D glyph in the valid movement direction (desired direction, col. 6, lines 21-24; col. 8, lines 20-22).

Claims 8-14, the rationale provided in the rejection of claims 1-7 is incorporated herein. In addition, Chen teaches a computer system having a memory and a data storage device (a memory unit 11; fig. 1); a drawing program (col. 4, lines 32-40).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 15-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (5,588,098) in view of Isensee et al. (5,734,805).

Claims 15-21, the rationale provided in the rejection of claims 1-7 is incorporated herein. In addition, Isensee et al. teaches a program storage medium readable by a computer to perform a method (col. 9, lines 29-32). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the program storage medium readable by a computer as taught by Isensee into the direct manipulation of a 3D object of Chen's teaching for provide a computer product of manufacturing, because it would provide a technique for computer assisted design and manufacturing, graphical shells for operating system such as multimedia programs, virtual reality programs and video games (col. 1, lines 18-22).
programs and video games (col. 1, lines 18-22).

Response to Arguments

7. Applicant's arguments filed 12/24/02 have been fully considered but they are not persuasive.

With respect to Applicant's arguments, Chen et al. teaches the simultaneous display of multiple 3D glyphs (hands and handles in fig. 3) directly on a geometric object (box) that is being directly manipulated using the glyphs (see the Office Action).

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Kimbinh Nguyen** whose telephone number is **(703) 305-9683**. The examiner can normally be reached **(Monday- Thursday from 7:00 AM to 4:30 PM and alternate Fridays from 7:00 AM to 3:30 PM)**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Zimmerman, can be reached at (703) 305-9798.

Art Unit: 2671

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:


(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Part II, 2121 Crystal Drive,
Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or
proceeding should be directed to the Technology Center 2600 Customer Service Office
whose telephone number is (703) 306-0377.

Kimbinh Nguyen

April 2, 2004


MARK ZIMMERMAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600